

In the Claims

What is claimed is:

1. (Currently Amended) A radiation diversity antenna structure comprising:

a substrate having a first side and a second side,

a conductive layer disposed on said first side,

a radiating element of the slot-line type coupled electromagnetically to etched into said conductive layer, said radiating element comprising a first arm formed of a radiating slot-line and at least one second arm formed of a radiating slot-line, said second arm extending said first arm in a tree structure,

a feed line , wherein the radiating element consists of arms in a tree structure, each arm having a length equal to $k\lambda_s/2$ where k is an integer and λ_s is the guided wavelength in the slot line constituting the arm, at least one of the arms comprising coupled to the middle of said first arm and

a switching means positioned in the slot line constituting the said arm in such a way as to control the coupling between the arm and the feed line as a function of a command in the at least one second arm to control the coupling of the first and second arms with the feed line.

2. (Currently Amended) The antenna of claim 1, furthermore comprising at least two second arms and at least two switching means wherein each arm of the at least two second arms comprises a respective one of the at least two switching means.

3. (Currently Amended) The antenna of claim 1, wherein the switching means is positioned in an open-circuit zone of the ~~slot~~ radiating slot-line forming said at least one second arm.

4. (Currently Amended) The antenna of claim 2, wherein the ~~switching means is positioned in an open-circuit zone of the slot~~ first arm has a length equal to $k\lambda_s/2$ and the at least one second arm has a length equal to $k'\lambda_s/2$, k and k' being an integer equal or different and λ_s the guided wavelength in the slot-line.

5. (Cancelled)

6. (Currently Amended) The antenna of claim 1, wherein the at least one each second arm has a length which is delimited by an insert positioned in a short-circuit plane of the slot-line forming said at least one second arm.

7. (Currently Amended) The antenna of claim ~~6~~ 5, wherein the insert is ~~placed~~ positioned at the level of junctions between said first and at least one second arms.

8. (Currently Amended) The antenna of claim 1, wherein the ~~tree structure has an H or Y or one which is associated with these shapes~~ radiating element comprises a first arm and 4 second arms forming an H pattern.

9. (Currently Amended) The antenna of claim ~~1~~ 8, wherein ~~the antenna is produced by microstrip technology or by coplanar technology~~ at least one of said 4 second arm is extended by two additional arms in an Y pattern.

10. (Cancelled)